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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/615,737

07/09/2003

Jeffrey J. Anderson

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02/10/2005

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EXAMINER

MOUTTET, BLAISE L

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

GA

|                              |                               |                                      |  |
|------------------------------|-------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/615,737 | Applicant(s)<br>ANDERSON, JEFFREY J. |  |
|                              | Examiner<br>Blaise L Mouttet  | Art Unit<br>2853                     |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35 is/are allowed.
- 6) ☒ Claim(s) 36, 37 and 39 is/are rejected.
- 7) ☒ Claim(s) 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because in figure 3 "%Rh/TEMP" should more properly read --TEMP/%Rh-- since the temperature data (i.e. 35 or 15) is located on the left side and the relative humidity data (i.e. 20 or 80) is located on the right side as described on page 10 of the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 36, 37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Terasawa et al. US 5,995,067.

Terasawa et al. discloses, regarding claim 36, a method comprising:

determining a spitting recovery level (i.e. low temp./low humidity or low temp./high humidity or high temp/low humidity or high temp/high humidity) of a fluid-ejection mechanism (as explained in view of figure 5 and column 5, lines 3-10, humidity and temperature measurements are made to determine spitting, i.e. predischARGE, recovery); and

adjusting at least servicing requirements of the of the fluid-ejection mechanism based on the spitting recovery level of the fluid-ejection mechanism (figure 5, column 5, lines 10-37),

wherein the spitting recovery level is related to a humidity of the fluid-ejection mechanism (figure 5, S32 and S35).

Regarding claim 37, a temperature of the fluid-ejection mechanism is determined and adjusting the servicing requirements is further based on the temperature (figure 5, S31, column 3, lines 1-12).

Regarding claim 39, the fluid ejection mechanism is an inkjet printer (title).

***Additional Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kaneko et al. US 5,428,379 and Morita et al. US 6,033,050 are examples of prior art fluid ejectors that use humidity and/or temperature sensing to control servicing of the fluid ejector.

Gast et al. US 5,583,547 teaches performing fluid ejector servicing based on a drop count.

Sarmast US 6,536,865 teaches determining a level of waste ink in a spittoon using a drop detector.

***Allowable Subject Matter***

4. Claims 1-35 are allowed.

Claim 38 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, and the claims dependent therefrom, while determining a spitting recovery level of a fluid-ejection mechanism and determining a humidity of a fluid-ejection mechanism are each shown respectively by the cited prior art, the

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determination of the humidity **based at least on** the spitting recovery level determined is not found to be shown or rendered obvious by the prior art of record in combination as currently claimed.

Regarding claim 20, and the claims dependent therefrom, while a controller to adjust servicing requirements of a fluid ejection mechanism based on humidity and temperature is indicated by the applied prior art, the controller does not adjust the servicing requirement based on a spitting recovery level determined by a fluid drop detector. This is not shown or rendered obvious by the prior art of record in combination as currently claimed.

Regarding claim 26, and the claims dependent therefrom, the means for approximating an operating humidity of the fluid-ejection mechanism based on an operating temperature of a fluid ejection mechanism and a number of unsuccessful attempts by the fluid ejection mechanism to eject the fluid drops before the successful attempt by the fluid-ejection mechanism to eject the fluid drops is not shown or rendered obvious by the prior art of record in combination as currently claimed.

Regarding claim 30, and the claims dependent therefrom, a computer readable medium having firmware to perform the method step of determining an approximate operating humidity of the fluid-ejection mechanism based on the number of the fluid drops counted and the operating temperature measured is not shown or rendered obvious by the prior art of record in combination as currently claimed.

Regarding claim 38, correlating the spitting recovery level as a number of the fluid drops attempted to be ejected until the fluid drop ejection has been detected is not

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shown or rendered obvious by the prior art of record in combination as currently claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet who may be reached at telephone number (571) 272-2150. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, Art Unit 2853, can be reached at (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet February 4, 2005

*Blaise Mouttet 2/4/2005*